

Status of the Payerne BSRN station

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Summary

- The Payerne station measures the BSRN basic set of parameters since November 1992. LW and SW irradiance at 10 and 30 m a.g.l., spectral direct irradiance and UV erythemal irradiance are also measured.
- Station entirely renewed end of 2011.
- Since renewal, intensive checks of instruments measuring shortwave irradiance have been performed. The absolute cavity radiometer allows checking the stability of the sensitivity coefficients. **Stability within about $\pm 1\%$ is observed over 4 years.**

PMO6 is **transfer standard** to WRR

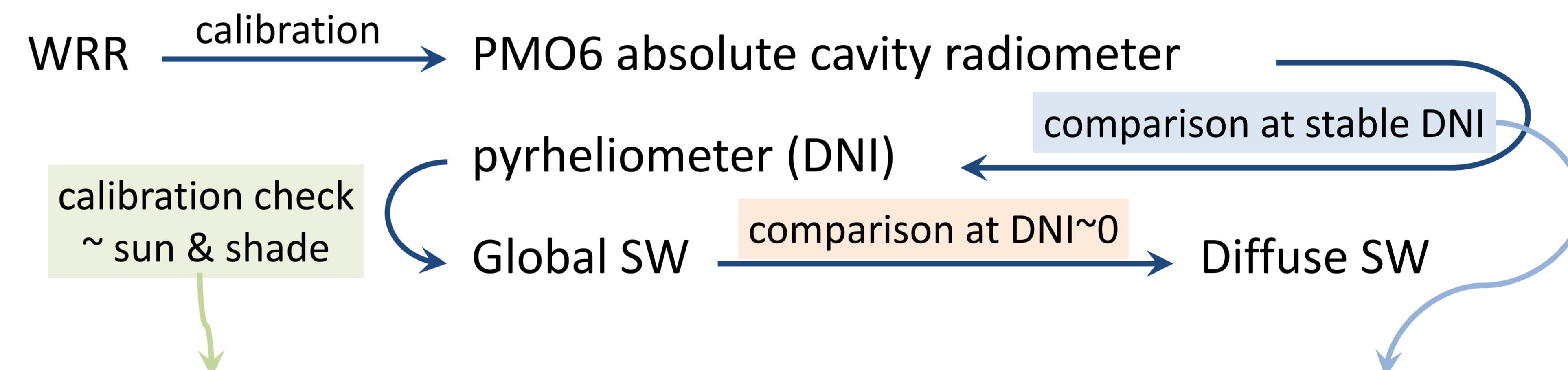


		Calibration	
		Period	Sensitivity
PMO6	October 2001 PMOD/WRC		135.31 ± 0.09 ($\text{m}^2 \cdot \Omega$) ⁻¹
	Sep/Oct 2011 PMOD/WRC		135.39 ± 0.06 ($\text{m}^2 \cdot \Omega$) ⁻¹

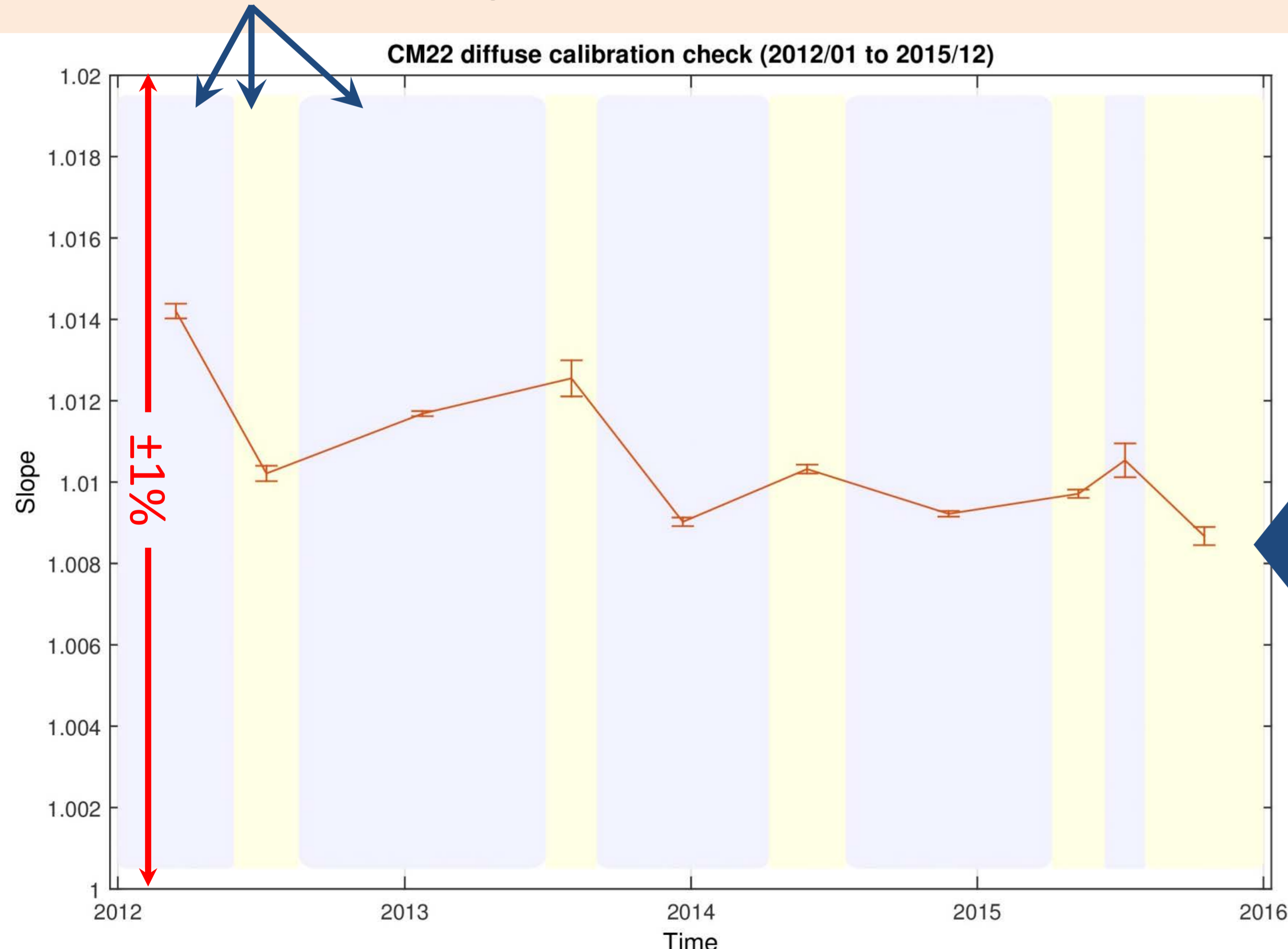
No change of sensitivity over **10 year period**

Uncertainty of calibration by World Radiation Center **< 0.1%**

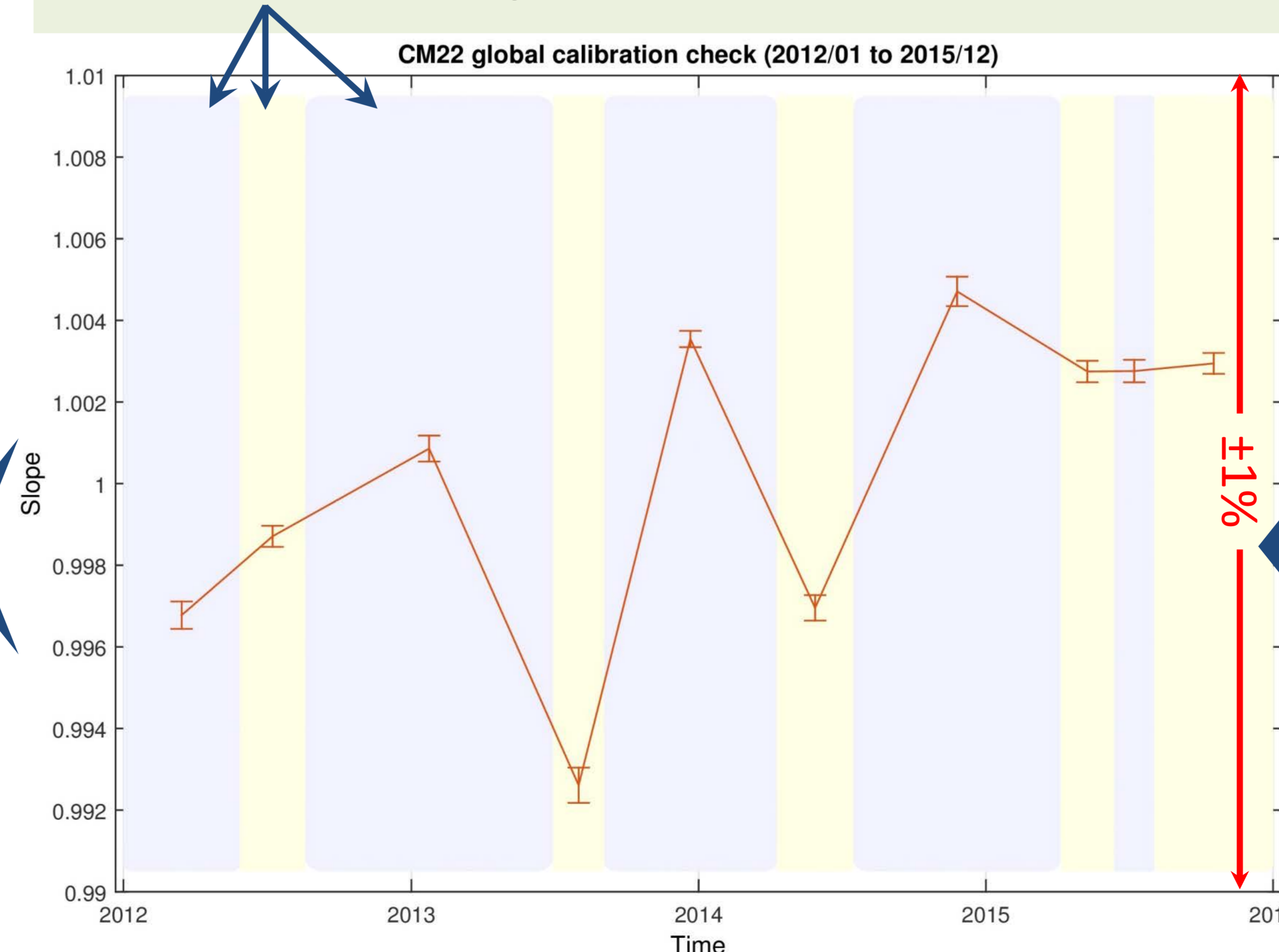
Traceability chain



Diffuse CM22 calibration check using global CM22 for periods including about 7000 clear-sky minutes



Global CM22 calibration check using CHP1 for periods including about 7000 clear-sky minutes



CHP1/PMO6 comparison, 10-day periods with at least 200 clear-sky min. DNI spanning at least 350 Wm⁻²

